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Knowledge, attitudes and practices regarding cervical cancer and screening among female nurses at Chunya District Hospital, Tanzania

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Abstract

Background: Cervical cancer is a preventable and is the third most commonly diagnosed cancer in women worldwide. About 83% of the world's new cases and 85% of all cervical cancer-related deaths occur in developing countries. However, lack of knowledge and awareness can result in underutilization of the preventive strategies. Healthcare professionals with adequate knowledge play a greater role in educating the general public on the belief and practices of the cancer of cervix. We assessed the knowledge, attitudes, and practices of cervical cancer and screening amongst female nurses at Chunya District Hospital, Mbeya, Tanzania.

Method: We conducted a cross-sectional study on female nurses at Chunya District Hospital, Mbeya, Tanzania. Data were collected using a predesigned and self –administered questionnaire. The questionnaire included specific sections to test the participant's knowledge, attitude, and practices related to cervical cancer and screening. Data analysis was done using descriptive statistics.

Results: Data from 138 participants were included in the final analysis. The age of the participants was between 20-59 years. The majority of participants had good level knowledge of cervical cancer (in terms of risk factors, signs and symptoms, ways of prevention and ways of screening). All 138 (100.0%) participants knew that Pap smear test is a useful test for detection of cervical cancer and 127 (92.0%) had undergone Pap smear testing.

Conclusion: Our study population showed good knowledge of cervical cancer as a disease. The participants had a good knowledge of Pap smear testing and the majority had undergone testing themselves. This study highlights the need for formal educational programs to public to improve knowledge regarding the risk factors and early signs and symptoms of cervical cancer.

Keywords: Knowledge; Attitudes; Practices; Screening; Cervical cancer

1. Introduction

Cervical cancer is a cancer of the cervix, the organ connecting the uterus and the vagina. It is mainly caused by human papilloma virus (HPV) which is a sexually transmittable infection-causing pathogen. There are several common risk factors recognized to be associated with cervical cancer worldwide include sexually transmitted diseases (mainly HPV andherpes simplex virus), reproductive and sexual factors (multiple sexual partners, early age at the first sexual intercourse, early age at first delivery, parity, and oral contraceptive pills), behavioral factors (smoking and obesity), and host factors (genetic sensitivity) [1]. Abnormal vaginal bleeding, foul smelling vaginal discharge, and contact bleeding are recognized as the major signs of cervical cancer, and in many cases, women with cervical cancer report no

symptoms. Almost all cervical cancers are caused by HPV, therefore, effective interventions on prevention of HPV infections can prevent cervical cancer [2].

Globally cervical cancer ranks third most common form of cancer among women after breast and colorectal cancer [3]. The women of poorer communities are most affected by the disease. Previous studies have shown that, about 83% of the world's new cases and 85% of all cervical cancer deaths reported are from developing countries [2]. Almost all cervical cancers are caused by HPV, therefore, are largely preventable [4]. During the past decades cervical cancer has decreased in developed countries [5]. This is mainly due to increased awareness and more effective screening and prevention strategies employed in these developed countries [6]. The HPV vaccine has contributed to a decline in the incidence rate of cervical cancer [7]. There are three types of tests available and widely used for the screening of cervical cancer. These include tests for HPV, cytology-based Papanicolaou test (Pap test), and unaided visual inspection with acetic acid (VIA) [8]. However, public awareness of these tests in developing countries is limited [9]. In most parts of Sub-Saharan Africa, South America, the Caribbean, and Southern Asia, cervical cancer is the leading cause of cancer death and premature death among women [10]. Sub-Saharan Africa is the region with the highest incidence of cervical cancer in the world with high mortality affecting women at their prime. This source is very important for cervical cancer which is preventable and curable using currently available methods [2]. Various studies in different developed countries show differences in women's knowledge and attitude regarding cervical cancer and its prevention, while in developing countries, women had poor knowledge towards cervical cancer and its prevention [11].

In Tanzania women with cervical cancer are diagnosed at late stages when curative treatments are no longer possible. Since 2002, the Tanzanian Ministry of Health, Community Development, Gender, Elderly and Children has collaborated with the WHO, the International Agency for Research on Cancer, the International non profit Jhpiego, and numerous other local and international NGO partners to scale up cervical cancer prevention efforts for Tanzanian women [12]. Service delivery Guidelines for Cervical Cancer Prevention Services, the use of visual inspection and cryotherapy is the secondary prevention approach that has been widely implemented in Tanzania [12]. This secondary prevention strategy for cervical cancer is a recommended strategy by the WHO for cervical cancer prevention in low resource settings [13]. Therefore, the aim of this study was to assess knowledge, attitudes and practices regarding cervical cancer and screening among female nurses at Chunya District Hospital, Tanzania.

2. Methodology

2.1. Study site

This study was conducted at Chunya district hospital located at Chunya District Council in the northwest part of Mbeya Region. The district is among the 8 districts of Mbeya Region (Fig.1). It lies between 7° and 9°Latitudes south of the Equator, and between 32° and 34° East of Greenwich. The district borders by Singida and Tabora Regions to the North, Iringa Region and Mbarali District to the East, Mbozi District to the South, Lake Rukwa to the West. According to National Census of 2012 the population of Chunya District was 206,615 people.

Figure 1 Map of Mbeya Region showing its districts

2.2. Study design

A descriptive cross-sectional study design was employed, in which data was collected at a single point in time using questionnaires consisting of particulars of the participants, assessing knowledge, attitudes and practices regarding cervical cancer and screening among female nurses at Chunya District Hospital, Tanzania. The study was carried out between October and December 2019.

2.3. Study population

The study population included all female nurses working at Chunya District Hospital.

2.4. Sample size determination

Sample size was calculated using Kish Leslie formula.

$$\text{N} = \frac{Z^2 P(100 - P)}{\varepsilon^2}$$

2.5. Sampling Technique

Female nurses aged (20-59) years were involved in the study. To ensure appropriate and equal representation from each age group of female nurses, proportionate sampling method according to the age group was adopted to drive a sample with equal representation 35 nurses for each age group (4 groups) making a total of 138 nurses. The participants were randomly selected from each age group. The nurses were approached on random basis from each age group. The total sample size was determined to be 138.

2.6. Data Collection

The data collected by structured guided questionnaires. The questionnaire prepared in English and translated into Swahili to maintain the consistency and content of the questionnaire, confidentiality of information, participant's rights and voluntarily informed consent were secured. The participants were asked the questions and their answers filled in the questionnaire by the researcher.

2.7. Data analysis

Questionnaires filled with irrelevant information were removed. The data from questionnaires with relevant information were analyzed with Statistical Package for Social Sciences (SPSS version 20).

2.8. Inclusion criteria

All female nurses who were willing to participate in the study.

2.9. Exclusion criteria

All female nurses who were unwilling to participate in the study.

2.10. Ethical consideration

Permission to conduct the study was obtained from the research committee of St. Francis University College of Health and Allied Sciences while permission to use participants in the Chunya District Hospital was sought from the District Executive Officer and District Medical Officer. Confidentiality: all research documents and information were treated as confidential.

3. Results

3.1. Socio-Demographic Characteristics of the participants in the study

A total of 138 participants were involved in this study. The majority of the participants 79 (57.3%) were of age between 20-29 years, 41(29.7%) were 30-39 years, 12(8.7%) were 40-49years and 6 (4.3%) were 50-59 years. Marital status, 78(56.5%) were married, 43 (31.2%) were single, 12 (8.7%) were cohabiting, 3 (2.2%) were divorced, and 2 (1.4%) were widow. All participants 138 (100.0%) had ordinary secondary education. Working experience of participants less

than 10 years were 90 (65.2%), 10-20 years were 32 (23.2%) and above 20 years were 16 (11.6%). The participants in this study were female nurses 138 (100.0%) as shown in Table 1.

Table 1 Socio demographic characteristics of participants at Chunya District Hospital

Variable	Frequency	Percentage
Age (in years)		
20-29	79	57.3
30-39	41	29.7
40-49	12	8.7
50-59	6	4.3
Marital status		
Single	43	31.2
Married	78	56.5
Divorced	3	2.2
Cohabit	12	8.7
Widow	2	1.4
Education		
Ordinary Secondary education	138	100.0
Working Experience		
<10 years	90	65.2
10-20 years	32	23.2
>20 years	16	11.6

3.2. Participant's knowledge about cervical cancer

In this study many of the participants were knowledgeable about cervical cancer. For example, 100.0% of the participants new that multiple sexual partners, 95.7% early sexual intercourse, and 83.3% HPV infection placed a woman at risk for cervical cancer.In advanced stages of cervical cancer, signs and symptoms a woman may experience are vaginal bleeding, foul smelling vaginal discharge and contact bleeding. However, a majority of the participants were knowledgeable (100.0%, 65.2% and 79.7%) respectively. As for preventing of cervical cancer, the majority of participants were knowledgeable of preventing cervical cancer, avoid multiple sexual partners, avoid early sexual intercourse and screening and treatment (84.8%, 94.9% and 93.5%) respectively. Lastly, all participants had knowledge about different ways of screening for cervical cancer (Table 2).

Table 2 Participant's knowledge about cervical cancer

Variable	Frequency	Percentage
Risk Factors		
Multiple sexual partners		
Yes	138	100.0
No	0	0
Early sexual intercourse		
Yes	132	95.7
No	6	4.3
HPV infection		
Yes	115	83.3
No	23	16.7
Signs and symptoms		
Vaginal bleeding		

Yes	138	100.0
No	0	0
Foul-smelling vaginal discharge		
Yes	90	65.2
No	48	34.8
Contact bleeding		
Yes	110	79.7
No	28	20.3
Prevention		
Avoid multiple sexual partners		
Yes	117	84.8
No	21	15.2
Avoid early sexual intercourse		
Yes	131	94.9
No	7	5.1
Screening and treatment		
Yes	129	93.5
No	9	6.5
What are the ways of screening		
Pap smear		
Yes	138	100.0
No	0	0
Visual inspection of cervix		
Yes	138	100.0
No	0	0

3.3. Participant's attitudes towards cervical cancer

The majority of participants showed agreement for all the statements in this section (Table 3).

Table 3 Participant's attitudes towards cervical cancer

Variable	Frequency	Percentage
Cancer of the cervix is highly prevalent and is a leading cause of deaths amongst all malignances in Chunya District		
Yes	120	87.0
No	18	13.0
Any woman including you can acquire cervical cancer		
Yes	138	100.0
No	0	0
Cancer of the cervix cannot be transmitted from one person to another		
Yes	133	96.4
No	5	3.6
Screening helps in prevention of cancer of the cervix		
Yes	135	97.8
No	3	2.2

3.4. Practice and knowledge of cervical cancer screening

All 138(100.0%) participants knew that Pap smear testwas a useful tool for detection of cervical cancer, 127 (92.0%) had undergone Pap smear testing. However, 89.1%, 8.7% and 2,2% of the participants knew that Pap smear test should be started at the age of 20 years, 30 years and after menopause, respectively. Further, 100% of the participants agreed that the best time for a Pap smear test is a week after menstrual period, and 97.1% responded that Pap smear test should be done by a doctor. Also, 100.0% of the participants agreed that if any abnormality is detected in Pap smear test the patient should be referred to a referral hospital. All 138 (100.0%) of the participants responded that there was no papillomavirus vaccine in their health facility (Table 4).

Table 4 Practice and Knowledge of cervical cancer screening

Variable	Frequency	Percentage
Pap smear is a useful tool for early detection of cervical cancer		
Yes	138	100.0
No	0	0
Age at which Pap smear can be started		
From birth	0	0
From Puberty	0	0
From 20 years	123	89.1
From 30 years	12	8.7
After menopause	3	2.2
I have undergone Pap smear test		
Yes	127	92.0
No	11	8.0
Best time for doing Pap smear test		
During menstrual low	0	0
A week after menstrual period	138	100.0
During pregnancy	0	0
During breast feeding	0	0
Pap smear test should be done by		
Doctor	134	97.1
Trained nurse	4	2.9
Abnormality in Pap smear test, what should be done?		
Leave it to God and pray	0	0
Do some laboratory tests	0	0
Refer to Referral Hospital	138	100.0
Benefits of Pap smear test		
Early detection of cervical cancer	138	100.0
Detection of any early abnormal changes in the cervix	0	0
Human papillomavirus vaccination is available in our health facility		
Yes	0	0
No	138	100.0

4. Discussion

This study measured knowledge, attitude and practice towards screening of cervical cancer among female nurses (20-59 years) at Chunya District Hospital, Mbeya, Tanzania. The study indicated that 100.0% of the participants new that multiple sexual partners, 95.7% early sexual intercourse, and 83.3% HPV infection placed a woman at risk for cervical cancer. This results are higher than the results ofstudies conducted in Uganda and Adis Ababa, Ethiopiawhich showed to be55.0% and 64.8% respectively [14,15]. The variation might be due to the difference in professional education,

which all participants in this study were nurses. Hence, knowledge of women about cervical cancer is an important factor to prevent the development of cervical cancer. Knowing the symptoms of cervical cancer helps women to seek healthcare early and get treatment before it gets worse. The majority of respondents in this study mentioned vaginal discharge, foul-smelling vaginal discharge and contact bleeding as the symptoms of cervical cancer. In a study done in Uganda, participants mentioned intermenstrual and post-coital bleeding as symptoms of cervical cancer [16]. In the current study, professional nursing education is associated with cervical cancer knowledge. The increment of knowledge of cervical cancer with nursing education indicates nurses have better information and understanding. Participants were asked whether cervical cancer is preventable. Participants responded that avoid multiple sexual partners and avoid early sexual intercourse (84.8% and 94.9%) respectively. The results in the present study is higher comparing to the study done in northern Korea which revealed 64% of the respondents did not know that cervical cancer is preventable [17]. Regarding attitude of participants in this study towards cervical cancer, 87.0% of the participants responded that cancer of the cervix is highly prevalent and is the leading cause of deaths amongst all malignances in Chunya district, 100.0% responded that any woman can acquire cervical cancer, 96.4% responded that cancer of the cervix cannot be transmitted from one person to another and 97.8% responded that screening helps in prevention of cancer of the cervix. The result in our study is higher than the results of the studies done in Tanzania 50% and Ethiopia 56% [18, 19]. The difference might be in our study the participants were nurse professionals while in other studies participants were not nurses. Regarding screening tests of cervical cancer, all 138 (100.0%) participants responded that Pap smear test is a useful tool for early detection of cervical cancer, 92.0% participants have undergone Pap smear test, 100.0% participants responded that abnormal Pap smear test should be referred to referral hospital, 100.0% participant responded that Pap smear test is useful for early detection of cervical cancer and 100.0% participants responded that the service of human papillomavirus vaccination is not available at the health facility Chunya District Hospital. This finding is higher than studies done in Ghana 3.3%, Iraq 28.7% and Qatar 76% [20,21,22]. This discrepancy might be due to the participants involved in the study. In our study the participants were nurse professionals while in other studies were not nurses.

5. Conclusion

Cervical cancer is preventable. Nurses should be proactive in promoting women's health and preventing disease. Therefore, making sure nurses are informed about the routine cervical cancer screening and preventive methods. This will be step forward making sure cervical cancer does not increase in Tanzania.

Compliance with ethical standards

Acknowledgments

Disclosure of conflict of interest

There is no competing interest.

Statement of informed consent

Written informed consent was obtained from all nurses who consented to the study, records were coded and participants/ Researcher names were not used. All the information collected remained confidential and was used for purposes of the study only. Participation was voluntary and no incentives were given.

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